



USG3325

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#17
07/02/03
PS
RECEIVED
JUN 18 2003
TC 1700

In re Application of: MARK H.

ENGLERT

Serial No.: 09/718,755

Filed: NOVEMBER 22, 2000

For: ACOUSTICAL TILE CONTAINING
WET-STRENGTH RESIN

Examiner: UMAKANT K. RAJGURU

Art Unit: 1711

) I hereby certify that this correspondence is

) being deposited June 13, 2003 with the

) US Postal Service addressed to:

) Commissioner of Patents, P. O. Box 1450

) Alexandria, VA 22202., with

) sufficient postage as First Class mail

) Name: Donald E. Egan

) Date: June 13, 2003

)
)
)
)
Signed Donald E. Egan

DECLARATION of BRUCE A. HUDGENS

Bruce A. Hudgens, being duly advised, declares as follows:

1. He received a BS degree in Chemistry from Miami University (Ohio) in 1967, a MS degree in Physical Chemistry (specializing in X-ray crystallography) from Miami University (Ohio) in 1970 and a PhD in Physical Chemistry (specializing in molecular spectroscopy) from the University of South Carolina in 1974. He has done additional course work in Earth Sciences and has a total of 37 credit-hours in geology.
2. He has been employed in the Research Department of United States Gypsum Co since 1979 in the analytical department. He has been a Research Associate since 1982.

3. Based on his education and employment, Declarant has become familiar with mica, its mining, its processing and its use in various products manufactured by his employer.
4. Mica is generally defined as "any of various colored or transparent mineral silicates crystallizing in monoclinic forms that readily separate into very thin leaves." (Merriam Webster's Collegiate Dictionary –1996) Because of its crystalline structure, naturally occurring mica is not water swellable.
5. He has reviewed US Patent 4,549,931 to Adamowicz et al. Adamowicz et al describes a binder system based on a "lithium and/or sodium water-swelling mica" and the thermal process required to prepare the "lithium and/or sodium water-swelling mica" for the binder. He has also reviewed US Patent 4,239,519 that is cited in the Adamowicz et al patent for a more complete explanation of the preparation of "lithium and/or sodium water-swelling mica."
6. US Patent 4,239,519 and the Adamowicz et al et al patent define the raw materials used to make the water-swelling mica as "selected from the group of fluorhectorite, hydroxyl hectorite, boron fluorophlogopite, hydroxyl boron phlogopite, and solid solutions among those and other structurally compatible species selected from the group of talc, fluorotalc, polyolithionite, fluorpolyolithionite, phlogopite, and fluorophlogopite." Thus, Patent 4,239,519 and the Adamowicz et al et al patent name 4 specific minerals (fluorhectorite, hydroxyl hectorite, boron fluorophlogopite, hydroxyl boron phlogopite) as the raw materials that may be combined

with each other or which may be combined with 6 other minerals. Fluorhectorite and hydroxyl hectorite belong to the smectite group of swelling clays and are not classified as mica. Patent 4,239,519 suggests boron fluorophlogopite and hydroxyl boron phlogopite don't exist in nature, but are produced synthetically. (See Col 10 line 32-52 of '519 patent)

7. Patent 4,239,519 and the Adamowicz et al et al patent describe methods for preparing the water-swelling mica that require that the starting materials (fluorhectorite, hydroxyl hectorite, boron fluorophlogopite, hydroxyl boron phlogopite) be heated and cooled in the prescribed manner. The prescribed thermal treatment produces a glass-ceramic material that is placed in a polar liquid (e.g. water) and allowed to swell until it shatters into small particles. The small particles swell and form the gel. After the gel and various fillers are molded into the desired shape, the shape is subjected to a salt solution containing large cations. The large cations replace the smaller lithium or sodium cations giving dimensional stability to the shape.
8. Declarant has also reviewed the specification of the above-identified Application Serial No 09/718,755. At page 12, Application Serial No 09/718,755 describes the use of "mica" as one of several well known inorganic fillers that may be used in a ceiling tile composition. Such a "mica" is not a "lithium and/or sodium water-swelling mica" nor is it "selected from the group of fluorhectorite, hydroxyl hectorite, boron fluorophlogopite, hydroxyl boron phlogopite." The "mica" described in

Application Serial No 09/718,755 can not be considered an inorganic gel as described in either US Patent 4,239,519 or Adamowicz et al Patent 4,549,931.

9. If one were to prepare the "lithium and/or sodium water-swelling mica" inorganic gel in accordance with the thermal processes of US Patent 4,239,519 or Adamowicz et al Patent 4,549,931, the inorganic gel would not function as a filler in acoustical tiles, but it would function as a binder. Such a binder would be completely unlike the binder described in Application Serial No 09/718,755.


10. Nothing in the Adamowicz et al patent suggests that conventional mica, with no thermal treatment, should be used as a filler in acoustical tiles or that conventional mica should be used for any other purpose. Moreover, the Adamowicz et al patent does not suggest using a "lithium and/or sodium water-swelling mica" as a filler in acoustical tiles.

11. Further Declarant sayeth naught.

WARNING

All statements made herein as of my own knowledge are true and all statements made herein as on information and belief are believed to be true. Declarant acknowledges that he has been warned that willful false statements and the like are punishable by fine or imprisonment or both (18 USC 1001) and may jeopardize the validity of the application or document or any patent resulting therefrom.

June 9, 2003


Bruce A. Huggens